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Committee on Commerce, Science and Transportation
Subcommittee on Surface Transportation and Merchant Marine
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Testimony

of the

International Brotherhood of Teamsters

Effects of Fatigue on Operators of Trucks and Rail Equipment

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I. Introduction and Statement of Interest of the IBT

The International Brotherhood of Teamsters is a labor organization whose members include hundreds of thousands of persons, mostly drivers, employed by motor carriers. Because of the large number of its members that are involved in motor transportation, the IBT has a strong interest in insuring that, at a minimum, any proposed changes to the house of service regulations do not impair the safety, health, or economic well-being of its members or the safety of the driving public.

Under the current regulatory regime, commercial drivers already routinely drive up to sixty hours a week, with substantial additional house logged performing non-driving tasks. In combination with these exceptionally long hours, the fact that drivers spend extended periods away from home, have little time for family or recreation, and often do not get regular sleep has created a situation in which driver fatigue and highway safety have become serious concerns.

In light of the demands placed on drivers in the modern economy and the implications of those demands on drivers and the safety of the general public, the IBT supports the efforts of FHWA to consider possible regulatory changes that have the potential to reduce driver fatigue, make drivers' schedules more reasonable, and enhance highway safety. Accordingly, the IBT firmly supports FHWA's goal of "considering modifications to its HOS regulations to be more responsible to its goal of reducing highway crashes involving CMV's." 61 Fed. Reg. 57252 (November 5, 1996).

In keeping with this focus, the IBT urges FHWA to require that any proposals made or regulatory changes finally adopted must meet a minimum threshold standard that they will demonstrably not lessen the safety of the nation's highways. More specifically, the IBT opposes any potential change that would extend the permissible driving time from the current ten hours or that would reduce the minimum off-duty period of eight hours. An indicated in the analysis provided by Dr. Rachel Rubin (see Exhibit B, attached hereto and discussed further below), longer driving periods produce increased fatigue:

> [F]atigue in drivers measurably accumulates throughout a driving trip as well as with increasing numbers of trips in a work week. The longer a driver drives in one trip (10-hour versus 13-hour), and the more trips he makes, the more fatigues be becomes.[1]

Thus, it is fundamental to this proceeding that any proposals considered must not increase driving time or decrease off duty time. Although many drivers would welcome an opportunity to make more money, most recognize that driving more than the current ten hours

[1] Rubin Critique at 9.

per day wold be dangerous to themselves and to the public.

II. Comments on Existing Research

The ANPRM states in numerous places that the purpose of the current request for comments is to collect information that might e useful for a possible future rulemaking rather than to propose or consider specific proposals. In keeping with that purpose, these comments primarily focus on two recent major studies that address driver fatigue. The first is the January 1995 study conducted by the National Transportation Safety Board entitled "Safety Study: Factors that Affect Fatigue In Heavy Truck Accidents" (the "NTSB Study"). The second document upon which the IBT comments is the Commercial Motor Vehicle Driver Fatigue and Alertness Study ("DFAS"), the full version of which was not released until early May 1997 by FHWA, Transport Canada, and the Trucking Research Institute of the American Trucking Associations Foundation. Because these studies either contain important data and conclusions regarding driver fatigue and safety or have been presented as providing a basis for possible regulatory change, the IBT believes that they warrant individual discussion at this early stage of the process.

A. The NTSB Study

The NTSB Study is a multi-variate statistical analysis that was specifically designed to evaluate the relationship of driver's duty and sleep time to fatigue as a cause of heavy truck accidents. This study is based on real-world accident data and not on an artificially chosen, non-random sample as was used in the DFAS Study. The full conclusion and recommendations of the NTSB Study are part of the record and will not be repeated here. Several central findings are directly relevant to this proceeding, however, and warrant specific mention. Among other determinations, the NTSB Study concluded the following:

1. The critical factors in predicting fatigue-related accidents in the Board's sample are the duration of the most recent sleep period, the amount of sleep in the past 24 hours, and fragmented sleep patterns.[2]

2. The truck driver in fatigue-related accidents in this sample obtained an average of 5.5 hours sleep in the last sleep period prior to the accident. This was 2.5 hours less than the drivers involved in nonfatigue-related accidents (8.0 hours).[3]

3. The hours-of-service regulations do not provide the opportunity to obtain an adequate amount of sleep because they do not consider time needed for travel, eating, personal hygiene, recreation, or inability to fall asleep immediately at the beginning of the 8-hour off-duty period.[4]

[2] NTSB Study Executive Summary at 2.
[3] Id.
[4] Id. at 3

For the purpose of the current proceeding, the single most important recommendation made by the Board is as follows

> Complete rulemaking within two years to revise 49 C.F.R. 395.1 to require sufficient rest provisions to enable at least 8 continuous hours of sleep after driving for 10 hours or being on-duty for 15 hours. (emphasis added)[5]

This recommendation was classified as a "Priority Action" by the NTSB.

In light of the clear relationships among sleep, current hours-of-service regulations, and fatigue-related accidents found by the NTSB Study, the IBT is troubled by the brief and somewhat dismissive treatment of that study in the ANPRM. After an abbreviated description of the NTSB Study, the ANPRM at 61 Fed. Reg. 57256 states that "the FHWA believes the information provided from the NTSB's study conducted to date has not yet produced a sufficient range of scientifically valid findings that will allow the FHWA to propose, today, a wholesale revision of current rules governing on- and off-duty driver activities." To the extent that this statement simply means that FHWA plans to look at data outside of the NTSB Study, it represents an appropriate approach. If this statement and the ANPRM's cursory discussion of the NTSB Study indicate an intention not to make the NTSB Study a central part of the regulatory analysis, however, the IBT submits that such an intention directly conflicts with FHWA's stated goal of assembling and considering the most relevant and scientifically valid data. The NTSB study is clear and directly on point. It must play a central part in any decision to adjust the hours-of-service regulations.

B. The DFAS Study

In a January 13, 1996, press release, then-FHWA Administrator Slater stated that the DFAS Study "will serve as an invaluable scientific foundation as we consider changing our 60-year-old commercial hours-of-service regulations." The authors of the study deserve credit for their substantial efforts, and it is hoped that the data collected from the DFAS Study will provide a useful staring point for further research. At the same time, however, inherent limitations in the scope and design of the study indicate that its conclusions are of only marginal usefulness in the current proceeding.

The "Peer Review Report of Commercial Driver Fatigue Research," dated April 23, 1995, and authored by David

[5] Id. at 4. The NTSB Study also made recommendations that, among other things, (1) driver compensation methods be examined to determine any effects on hours-of-service violations, accidents, or fatigue; and (2) regulations be amended to prohibit employers, shippers, and other from scheduling shipments that would require that the driver exceed the hours-of-service regulations. Id.

Shinar and Robert M. Nicholson (attached as Exhibit A), includes the following observations regarding the DFAS Study:

> The Driver Fatigue and Alertness study suffered from poor design and an inappropriate statistical approach to address the major objectives.[6]
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> * * *
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> The analysis plan is chaotic:
>
> a. Variables are confounded (e.g. time on task and time of day), and disconnected from the objectives.
>
> b. The analyses look like a fishing expedition rather than a properly designed plan for a test of predetermined hypotheses.
>
> c. The analyses ignored environmental conditions that affect workload (e.g., traffic, roadway, weather).
>
> d. Many confounding variables were not taken into account, though they could have been (e.g., sleep patterns prior to participation in the study, time of day, circadian time).[7]

In order to obtain an independent evaluation of the scientific validity of the DFAS Study, the IBT asked Rachel Rubin, M.D., M.P.H., of the Division of Occupational Medicine of the Cook County Hospital in Chicago, Illinois, to review the study. Dr. Rubin's qualifications and a full copy of her findings are attached as Exhibit B.

Dr. Rubin's analysis confirms many of the criticisms of the DFAS Study set forth in the Peer Review Report. For example, Dr. Rubin noted that the study did not control for differing weather conditions and did not attempt to analyze the effects of cumulative, long-term fatigue.[8] In addition, Dr. Rubin observed that the sample of drivers was not randomly selected, raising a fundamental question of whether the study drivers are in fact representative of commercial motor vehicle drivers generally.[9]

For the purposes of evaluating the suitability of using the DFAS Study as a basis for changing the HOS regulations, two of Dr. Rubin's observations are particularly relevant. First, in direct contradiction of the DFAS conclusion that "[h]ours of driving (time-on-task) was not a strong or consistent predictor of observed fatigue,"[10] Dr. Rubin found that the design of the DFAS Study "did not permit a real comparison of the development of or relative level of fatigue between the two sets [10-hour and 13-hour] of driving schedules."[11] In a study claimed to be a fundamental basis of possible changes in the hours-of-service regulations, a design

[6] Peer Review Report at 2.
[7] Id. at 6.
[8] Rubin Critique at 1.
[9] Rubin Critique at 3.
[10] DFAS Executive Summary at 8.
[11] Rubin Critique at 1.

defect that prevents an effective analysis of the relative fatigue-producing effects of a 10-hour driving shift versus a 13-hour driving shift is a major defect.

The second of Dr. Rubin's observations that is particularly relevant to the matter at hand is that the current hours-of-service regulations do not allow drivers to obtain sufficient sleep to avoid being sleep deprived. Dr. Rubin states in part:

> There is ample reason for the drivers to be sleep deprived as discussed above, and the authors documented insufficient sleep during the study period. Sleep deprivation has been well documented to cause fatigue, but the current hours-of-service regulations in both Canada and the U.S., which were adhered to in this study, apparently are not adequate to allow drivers to get sufficient sleep during the work week.[12]

Here the NTSB, the DFAS Study, and Dr. Rubin are in complete agreement. All have found that, under the current regulations, drivers do not have time to get enough sleep. This should not be surprising in light of the fact that a driver can have as little as eight hours <u>total</u> time off between shifts. The authors of the DFAS study suggest somewhat callously that these eight hours would be enough if truckers had their priorities in order:

> The study design was developed to comply with existing U.S. and Canadian hours-of-service regulations. It was expected that the drivers would get adequate sleep. They did not. The reasons for this are not simple or clear. The data collection protocol nominally took about 0.9 hour total from the drivers' post-work-period time off (i.e., time between trip end and trip start), leaving the Condition C2-10rotating, C3-13nightstart, and C4-13daystart drivers with about 8.7 hours on average. Come of that time was spent on the necessary activities of commuting to and from work, eating, and personal hygiene. <u>Several instances were observed of social and recreational activities (e.g., talking, reading, watching television) that seemed to be time ill-spent in an intense work schedule where sleep should have had higher priority</u>. In any event, although their minimum requirement for sleep could not be established precisely, these drivers certainly got less sleep than they needed as judged by formal clinical criteria (overall average was 4.8 hours per principal sleep period).[13] (emphasis added)

This passage from the DFAS study clearly recognizes that drivers do not get enough sleep under the current hours-of-service regulations. Contrary to the assertion of the study's authors, however, at least part of that reason is both simple and clear: current legally allowed driving schedules simply do not include enough time for drivers to sleep. The suggestion that this could be remedied if drivers would refrain from "talking, reading, and watching television" (to say nothing of spending time with their families) it is

[12] Rubin Critique at 7.

[13] DFAS Study Technical Summary at 47.

[14] As Dr. Rubin Observed:

It was noted that the drivers did not use their off-duty time to maximize their sleep time. Drivers should not be expected to only work, eat, and sleep. Family and social activities are necessary parts of life needed to maintain oneself in a heathy condition.

ridiculous as it is offensive.[14] The plain truth revealed by the DFAS study, the NTSB Study, and common sense and experience is that the hours-of-service regulations currently do not allow drivers to get enough sleep. Any proposed changes in the regulations must therefore at a minimum preserve existing of-duty time and not expand driving or on-duty time.

C. Additional Research

The IBT requests that Exhibit C, and article entitled "The Health of Truck Drivers," by Joseph LaDou, M.D., be included in the record.[15] Among other observations regarding health and safety concerns affecting truck drivers, Dr. LaDou concludes that "[s}leep deprivation is common among many long-haul drivers, particularly owner-operators who must drive long hours to meet deadlines." Dr. LaDou goes on to observe that "[p]rolonged driving time -- even without sleep deprivation -- also appears to have a significant deteriorative effect on driver performance."[16] The IBT also recommends that the FHWA sponsor additional research regarding the physical, mental, and emotional effects that driving a CMV can have on drivers.

III. Specific Questions

The IBT includes as Exhibit D brief answers to the specific questions posed by the ANPRM. Although the IBT believes that many of the questions may be more appropriately asked in the context of evaluating particular regulatory proposals, responses are provided in order that the agency as before it the IBT's fundamental views on what shape any changes should take. These answers are based on the professional experience of Teamster drivers and the union as a whole. As such, the answers embody the best professional judgement available.

IV. Conclusion

The most relevant and scientifically valid existing research relating to hours-of-service, driver fatigue, and highway safety is the NTSB Study. The IBT respectfully submits that the findings and recommendations of that study should be given great weight by FHWA as it considers hours-of-service regulatory adjustments. The DFAS study, which has been presented by the

Rubin Critique at 6.

15 LaDou, The Health of Truck Drivers, Occupational Medicine: Principles and Practical Applications, Year Book Medical Publishers, Inc., Chicago, Ill., 958-970 (2nd edition 1988).

16 Id. at 964.

Department of Transportation and others as being the centerpiece study around which new regulations will be formed, fails to address central issues in a scientifically valid manner. As such, that study cannot form the basis for any changes to the current regulations.

The IBT submits that the current research and literature strongly indicate that the current hours-of-service regulations do not allow truck drivers to get enough sleep. Any changes to those regulations, therefore, must be geared toward expanding off-duty time and ensuring that driving time does not increase. There must be not increase in the amount of driving time within the permissible total on-duty time, and "on-duty-not-driving" time should remain as a separate classification because it involves different responsibilities and workloads. Finally, the IBT recommends that FHWA consider better enforcement of the existing regulations, including the adoption of regulations holding shippers responsible for making demands that would require violations of hours-of-service regulations, as an integral part of the regulatory effort. As the elected representative of a significant number of professional drivers, the IBT looks forward to further active participation as this proceeding continues.

Respectfully submitted,

INTERNATIONAL BROTHERHOOD OF TEAMSTERS

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